

**CIBA FOUNDATION SYMPOSIUM—The Nature of Sleep**—G. E. W. Westenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A., editors for the Ciba Foundation. Little, Brown & Company, 34 Beacon Street, Boston, Massachusetts, 1961. 416 pages, \$10.00.

This book is the product of a Ciba Foundation Symposium. It consists of 18 formal papers, chiefly electrophysiological, with provocative discoveries by a distinguished group under the chairmanship of Sir John Eccles.

The study is directed toward an understanding of the modes of action of neurones in the cortex and brain stem, and their integration and their role in this complex physiological state, sleep. There are also three papers on Hibernation and Sleep, Sleep Patterns on Polar Expeditions, and the Nature of Dreaming, which add a clinical flavor.

The book is a great contribution, interesting in content and approach, and more important in revealing the threshold to avenues of research which promise significant advances of knowledge.

I can think of no discerning physician who will not be rewarded by reading parts of this book—no matter along which lines his interest may be, be it physiological or behavioral, there is matter of interest. Considering how much of our time is spent in the state of sleep, it is well that we should all know more about its nature, and more about the present paths being explored toward its further understanding. Perhaps one may have personally enjoyed the book too much to offer a critical appraisal of its value to all readers; but one does not hesitate to say that anyone who undertakes the small pains of browsing through it, will inevitably read more.

DONALD MACRAE, M.D.

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**HUMAN ADRENAL GLAND**—Louis J. Soffer, M.D., F.A.C.P., Attending Physician and Head of Endocrinology, The Mount Sinai Hospital, New York City; Ralph I. Dorfman, Ph.D., Director of Laboratories, Worcester Foundation for Experimental Biology, Shrewsbury, Mass.; and J. Lester Gabrilove, M.D., F.A.C.P., Associate Attending Physician, The Mount Sinai Hospital, New York City. Lea & Febiger, Washington Square, Philadelphia 6, Pa., 1961. 591 pages, \$18.50.

I know of no authorities on clinical endocrinology I consider more sound than Doctors Soffer and Gabrilove, and no one knows more about steroid biochemistry than Doctor Dorfman. All are masters of clear presentation. These three have combined their special talents to write the most useful, complete, reliable, up-to-date account of modern knowledge of the adrenal gland available. I am amazed that they have been able to include in a book published in 1961 such recent items as the latest important corticosteroids; a critical evaluation of the clinical usefulness of *o*, *p'*, DDD, triparanol (Mer-29), and methapyrhone (SU-4885); the formulas of the many corticotrophic and melanocyte-stimulating peptides, including Hofmann's synthetic, complete ACTH which contains only 23 amino acid residues; and even the latest evidence that the renal juxtaglomerular apparatus stimulates aldosterone elaboration by its own secretion of angiotensin. On the other hand, possibly deliberately, they have omitted the evidence that the adrenal cortex has a special phosphorylase system from which energy for steroid biosynthesis is derived. The busy physician may wish to start his reading with Chapter 4, which gives him an adequate background in the chemistry and metabolism of the hormones, or, if he has more time, will enjoy reading the details of these processes in Chapters 2 and 3.

Discussions of the complicated adrenal cortical and medullary physiology are detailed and clear. The authors do not fall into the all too prevalent pit of making complex matters simple, but rather clarify where the less exact might mislead by simplifying. The steroid nomenclature

throughout is sensible and readily understandable. Most corticoids are named as derivatives of cortisol (hydrocortisone) or of prednisone. I wonder why this nomenclature is not used universally instead of the cumbersome terms based on chemical relations to cortisone or corticosterone.

At the end of each section the authors pause for a brief, clear summary, including a statement of the areas of ignorance and controversy. These are particularly valuable in the clinical sections, starting with the nonendocrine uses of corticoids and corticotrophin. The only important indication I missed is the relatively rare, but lifesaving use of these agents in vitamin D poisoning and most other hypercalcemias. The authors are exact enough to qualify the dreadful term "side effects" in quotation marks in the text, but it appears in unmitigated form as the title of a table listing these unwanted physiological actions of adrenal corticoids.

References are encyclopedic and not restricted to those in the English language. The sections on Addison's disease and Cushing's syndrome are superb. The difficult matter of distinguishing the type of Cushing's syndrome due to adrenal cortical tumor from that caused by hyperplasia is dealt with thoroughly.

In the section on the "adrenogenital syndrome" the reader receives as a dividend a brief but comprehensive dissertation on current concepts of gonadal differentiation and the significance of chromatin and chromosome patterns. Aldosteronism is also thoroughly covered. The sections on disorders of adrenal medullary function properly receive less space, but are excellent, complete, current and clinically oriented.

I was particularly gratified to read that these authorities have been able to cure most of their patients with Cushing's disease (bilateral adrenal cortical hyperplasia) without producing Addison's disease, and without favoring the growth of pituitary tumors. This section should be read carefully by any physician contemplating adrenalectomy for his patients with Cushing's disease. The fact that pituitary irradiation must be given in adequate doses (which are spelled out) and usually takes more than six months to produce remission probably explains the failures of this treatment in the hands of less experienced investigators. The whole subject of pituitary-adrenal cortical relations is carefully documented, including its history, passing through the period of disenchantment with the pituitary, through the full circle to the current confirmations of Cushing's original hypothesis that Cushing's disease either originates in or is mediated by pituitary basophils.

If the authors merit an "A," the publishers deserve something less. In their favor, the type is clear and printed on excellent paper which is thin enough so that almost 600 pages take up little more than an inch of shelf space. When the second edition appears, I hope they will do a better job of proofreading and indexing. I counted over a dozen typographical errors in 100 pages, and noted one illustration printed upside down! The index bothers me particularly. For example, in looking up the well-known actions of adrenocortical steroids on the central nervous system, I found none indexed under "Central nervous system," "Nervous system," "Convulsions" or "Psychosis." Yet this subject is thoroughly covered in the appropriate sections, and particularly its clinical manifestations.

This book can be unqualifiedly recommended for students and physicians who practice any branch of medicine in which corticosteroids are used or in which patients with disorders of adrenal cortical or medullary function may be seen. It is by far the best book on the subject.

GILBERT S. GORDAN, M.D., Ph.D.